

5 JAN 1983

RECORD OF DECISION
ST. JOHNS BAYOU AND NEW MADRID FLOODWAY, MISSOURI

Decision. The Department of the Army finds that improvements in the St. Johns Bayou and New Madrid Floodway basins for flood damage reduction, recreation and fish and wildlife mitigation are needed, economically justified and technically, socially, and environmentally acceptable. The recommended plan includes 23 miles of vegetative clearing of channels, 96 miles of channel enlargement and a 1,000 cubic foot per second (cfs) pumping station in the St. Johns Bayou basin. Also included are 25 miles of channel enlargement and a 1,500 cfs pumping station in the New Madrid Floodway. Environmental features of the recommended plan include the fee acquisition of 1,200 acres of woodland and 1,300 acres of cropland in the Ten Mile Pond with improvements to create a 775 acre greentree reservoir. The 2,500 acres for mitigation of project related fish and wildlife losses will be managed by the Missouri Department of Conservation. The acquisition of 2,100 acres of construction right-of-way in perpetual restrictive easements for use as fish and wildlife habitat and the seasonal flooding of 4,125 acres of cropland and 775 acres of woodland for waterfowl are also included as is a fish pool weir on St. Johns Bayou Main Ditch to create a pool of approximately 37 acres. For recreation a bike/hike trail 2.1 miles long will be constructed from the south side of Sikeston to the city park on the north side of the city along the right-of-way of St. Johns Bayou Main Ditch.

Essential Considerations. The development of alternative plans was done within the context of the dual national objectives of National Economic Development and Environmental Quality. Specific planning objectives for the study were developed to apply these national objectives. The study planning objectives were to reduce both urban and agricultural flood damages, to preserve and enhance recreational opportunities and aquatic and wildlife resources, and to minimize adverse impacts on wetlands and water quality. The final array of alternatives were evaluated in terms of their contributions to these objectives. They were all found to be economically justified and contributed in varying degrees to the planning objectives. The split floodway plan was an unacceptable solution for flood control because there were not combinations of channel enlargement, gravity outlet structures or pumping stations which were economically justified in the upper portion of the floodway and significant agricultural flooding was induced in the area by the plan.

Alternatives Considered. Rural channel improvements in the study area considered for recommendation included those which would provide 1.1-, 2-, 3-, and 10-year protection. Urban channel improvements considered in the vicinity of Sikeston and East Prairie included both earthen and concrete channels ranging in flood protection from the 1.1-year to standard project flood. Also alternatives were formulated for both the St. Johns and New Madrid Floodway which considered an improved gravity structure and various size pumping stations. Alternatives were formulated for the Floodway area which would have diverted flows north of Barker Ridge through the levee via a gravity outlet and pumping station with appropriate closures in the Ridge itself. Nonstructural measures were also considered for Sikeston but were found to be economically infeasible.

FACSIMILE HEADER SHEET
 (FR 105-1-5)

FROM (Name) D. Rhodes	OFFICE SYMBOL LMVPD-F	TELEPHONE NO. 5828	RELEASED SIGNATURE <i>[Signature]</i>		
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Environmentally Preferable Alternative. The plan (Plan 1) includes 75.2 miles of channel enlargement, and 46.9 miles of vegetative clearing to provide a 1.1 year level of protection from headwater flooding and a 1,000 cfs pumping station on St. Johns Bayou and a 250 cfs pumping station on East Bayou Ditch to provide a reduction in backwater flooding. Enhancement features which are a part of this plan are: purchase of 1,200 acres of bottomland hardwoods along St. Johns Bayou Main Ditch; restrictive easements on 869 acres of disposal areas along all improved channels for wildlife habitat with the embankments to be undisturbed in the future; fertilizing and seeding of embankments with a seed mixture which will provide growth for wildlife food and cover; enlargement of channels from one side only wherever feasible; construction of a hike and bike trail along 2.1 miles of St. Johns Bayou Main Ditch in Sikeston; purchase of 2,300 acres in the Tammie Pond Area for fish and wildlife management; development of two greentree reservoirs with 775 acres in the Tammie Pond Area; provide a seasonally flooded 4,900 acre waterfowl area in lower St. Johns Bayou and New Madrid Floodway Basin; construct a trial fish pool weir on St. Johns Bayou Main Ditch. No mitigation is required with this plan since the environmental features included in this plan are expected to provide a net environmental enhancement. Also the other alternatives would result in the loss of bottomland hardwoods and wetlands with the losses ranging from 97 to 348 acres. The EQ plan included features which provided a net environmental enhancement but only minimal flood damage reductions for the area. The recommended plan, however, provides the most efficient combination of flood control features, environmental features to minimize and/or mitigate environmental losses, and a recreational feature in the largest population center of the study area. Approximately 243 acres of wetlands would be lost as a result of the recommended plan, but all practicable efforts have been taken to minimize the loss of these wetlands and other environmental resources. The recommended plan will greatly reduce both urban and rural flood problems, will provide additional recreation opportunities, and will mitigate fish and wildlife losses. This plan is considered to be the best plan for implementation.

Minimizing Adverse Impacts. Several measures have been included in the plan to mitigate environmental damages. The pumping stations in the St. Johns Bayou Basin and the New Madrid Floodway will be operated to allow impoundment on approximately 2,300 acres in the St. Johns Basin and approximately 2,400 acres in the floodway. The flooding will begin as soon after harvest as possible and be allowed to remain until about 1 February which is expected to allow 2 to 3 months of flooding annually for use by migratory waterfowl. Approximately 2,300 acres of land in the Tammie Pond area are to be purchased in fee title for mitigation of project related fish and wildlife losses. This area, consisting of approximately 1,300 acres of cleared agricultural lands and 1,200 acres of bottomland hardwoods is recognized as one of the most significant environmental resources in the area. The Missouri Department of Conservation is expected to manage the Tammie Pond area and with proper management the cleared acreage as well as the woodlands will become high quality wildlife habitat. The greentree reservoir in the Tammie Pond area would be created by construction of control structures and placement of fill material designed to maintain a pool of approximately 600 acres on the west side of the proposed diversion channel and approximately 175 acres on the east side. These features will be managed by the Missouri Department of Conservation for waterfowl. Restrictive easements are to be obtained on land used for disposal of excavated material. These easements will provide for the

use of the embankments for wildlife habitat and disposal of material removed from the channel during maintenance operation only. The excavated material is to be left in a rough condition and fertilizer and a seed mixture of Korean lespedeza and switchgrass applied to provide cover and food for wildlife. This special revegetation will be on approximately 2,100 acres of restrictive easements to provide a buffer strip of vegetation for wildlife habitat along all the improved channels for the life of the project. A weir six feet high would be located in St. Johns Bayou Main Ditch to create a pool with a maximum depth of six feet and a pool acreage of 37 acres. The weir will serve as a trial method of improving fisheries in the area.

Compliance with Environmental Requirements. The recommended plan is in compliance with all pertinent environmental statutes applicable to this phase of study including Section 404 of the Clean Water Act.

William R. Glanelli
Assistant Secretary of the Army
(Civil Works)